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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,471	12/14/2001	Ching-Hsing Huang	3313-0443P-SP	1066
2292	7590	08/24/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			SMITH, JULIE KNECHT	
			ART UNIT	PAPER NUMBER

3682

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/014,471

Applicant(s)

HUANG ET AL.

Examiner

Julie K Smith

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 8-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 1-7 in the reply filed on 6/6/03 is acknowledged. The traversal is on the ground(s) that the invention claimed in claims 8-18 is not materially different. This is not found persuasive because the invention in claim 8 requires a pre-pressure and the invention in claim 1 makes no claim to a pre-pressure being applied to the bearing. In the case that claim 3 is found to be the generic allowable claim, claims 8-18 will be rejoined.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1, 3, 4, 6, 7 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Wasson (5,871,285). Wasson discloses a hydrodynamic bearing comprising a sealed housing containing a lubricant, a cylinder-shaped bushing (6) placed in the housing having a plurality of dynamic pressure generating herringbone grooves (12) that penetrate through the bushing (through holes 8) for storing the lubricant, and a shaft (7) rotatably installed in the bushing, wherein the lubricant produces hydrodynamic pressure between the grooves and the shaft, when

Art Unit: 3682

the shaft rotates relative to the bushing. Wasson further discloses a pre-pressure being applied to the bushing for making the lubricant pass through the grooves (see col. 4, lines 20-35). Wasson does not explicitly state that the pre-pressure is applied to the housing of the bearing, however, by applying the pressure to the bushing, a pressure difference is created between the outside of the housing and the inside of the housing, causing the lubricant to flow into the grooves of the bushing.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wasson as applied to claims 1, 3, 4, 6, 7 and 19 above, and further in view of Mori et al. (6,250,807).

Regarding claim 2, Wasson discloses a hybrid bearing as claimed, but is silent as to the housing comprising a porous material for storing lubricant. However, Mori et al. teaches a housing for a bearing having a porous material for storing lubricant.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the housing of Wasson with the teachings of Mori et al. to provide a porous housing so as to more evenly distribute the lubricant over the length of the bushing and shaft.

Art Unit: 3682

Regarding claim 5, Wasson discloses a bearing with a sealed housing, but does not disclose the housing sealed with glue. However, Mori et al. teaches a housing containing a lubricant with a seal made from a synthetic resin.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the seal of Wasson with the teachings of Mori et al. to be made from a glue as it is old and well known in the art to use glue as a sealant.

Response to Arguments

6. Applicant's arguments filed 5/21/04 have been fully considered but they are not persuasive. Regarding applicant's arguments that Wasson does not disclose a housing for the bearing, the background section of the patent discloses these types of bearings being used in many different environments, all which must inherently include housings to contain the lubricant. Therefore, it is inherent in the patent that the bearing is provided in a housing.

Regarding applicant's arguments that the grooves of Wasson do not penetrate the bushing, it is seen in Figure 3 that the grooves also comprise holes (8) which penetrate through the bushing. These holes are part of the grooves that are located on an internal surface of the bushing.

Regarding applicant's arguments that a pre-pressure is not applied to the bearing, however, before lubricant can pass through the bushing, a pressure must be applied. Therefore, it would be considered a pre-pressure.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie K Smith whose telephone number is 703-305-3948. The examiner can normally be reached on Monday-Friday, 8-5:30, (Every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on 703-308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3682

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

U/S

Jks

August 19, 2004

 8/18/04
WILLIAM C. JOYCE
PRIMARY EXAMINER